AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) Process for preparing a homogenous mixture of coated particles containing a graphite based conductive nucleus and at least ~~one~~ two partial or complete coating of the surface of said nucleus, the coating ~~being based on an~~ comprising a first interactive functional agent, the first interactive functional agent consisting of a material that differs in composition and/or in physical shape from the material that constitute the nucleus of the coated particles,

said process including at least one step of crushing particles of the graphite nucleus together with particles of the first interactive functional agent,

the particles of graphite having an average size ~~Y~~ X and those of the first interactive functional agent having an average size ~~X~~ Y such that the ratio Y/X is smaller than 1, and

said process further comprising a second crushing step, wherein the coating particles obtained in the first crushing step are subjected to a second crushing in the presence of a second interactive functional agent that is identical or different from the first interactive functional agent used in the first crushing step,

the average size of the particles of the second interactive functional agent being smaller than the size of the coated particles obtained in the first crushing step.

2. (Currently Amended) Process according to claim 1, in which the first and second interactive functional ~~agent is~~ agents are selected from the group consisting of:

graphite having a shape that differs from that of the graphite(s) that constitute(s) the nucleus but belonging to the same class of crystallinity;

ceramics ~~(preferably ceramics of the type TiO_2. Al_2O_3, ZrO_2, SiC, Si_3N_4, still more preferably those of the type TiO_2, and/or ZrO_2)~~;

fluoride salts ~~such as LiF~~ or alkaline-earth fluorides ~~such as~~

~~(LiF)CaF_2~~;

metals and alloys ~~(preferably alloys of the metallic type, still more preferably the metallic alloys containing one of the elements of the group consisting of Si, Sn, Ag, and Al)~~;

oxides~~, preferably oxides of the type MgO, Li_2CO_3 and SiO_2~~; and

polymers that are solid at room temperature ~~such as:~~

~~-four branch polymers preferably having hybrid terminals, still more preferably those having hybrid acrylate terminals (preferably methacrylate) and alkoxy (preferably alkoxy with 1 to 8 carbon atoms, still more preferably methoxy or ethoxy), or vinyl; one branch at least (and preferably at least two branches) of said four branch polymer being capable of giving rise to cross-linking,~~

~~-polyoxypropylenes and polyoxyethylenes with an average molecular weight that advantageously varies from 150 to 20,000,~~

~~-polysiloxanes ([Si(R)-O]-) such as those of the type poly(dimethyl)siloxane, poly(ethoxysiloxane), poly(octamethyl)trisoloxane, preferably having a molecular weight that varies from 150 to 10,000, still more preferably polyoxysiloxanes of the type Poly(dimethylsiloxane-co-methylphenylsiloxane) preferably having a molecular weight of about 800; and~~

~~-mixtures of at least two of the above~~.

3. (Currently Amended) Process according to claim 1, in which the size of the particles that are subject to crushing is selected so that X is at least 150%~~, and preferably at least 200%~~ higher than Y.

4. (Currently Amended) Process according to claim 1, in which at least 10%~~, preferably at least 80%,~~ of the surface of the nuclei is covered with a coating.

5. (Currently Amended) Process according to claim 1, in which the homogenous mixture of coated particles obtained ~~is characterized by~~ has a size distribution having a single peak~~, preferably~~ when the particle size is measured with the Microtrac X100 apparatus of MICROTRAC and/or by means of a conversion rate ≥ 90 %.

6. (Currently Amended) Process according to claim 1, in which the crushing ~~step is~~ steps are carried out under inert atmosphere~~, preferably consisting of a gas selected from the group consisting of argon and nitrogen and mixtures thereof, still more preferably in the presence of argon~~.

7. (Currently Amended) Process according to claim 1, in which the crushing ~~step is~~ steps are carried out at a temperature between 20 and 1000° C~~, preferably at a temperature between 25 and 800° Celsius~~.

8. (Currently Amended) Process according to claim 1, in which the crushing ~~step is~~ steps are carried out for a period during 10 seconds to 4 hours~~, preferably during 60 seconds to 3 hours~~.

9. (Currently Amended) Process according to claim 1, in which the crushing ~~step is~~ steps are carried out in the presence of a solvent ~~preferably selected from the group consisting of water, organic solvents, inorganic solvents, and mixtures of at least two thereof, preferably the solvent is selected from the group consisting of water, ketones, alkenes, alkanes and alcohols, still more preferably the solvent is selected from the group consisting of water, acetone, toluene, heptane, methanol and mixtures thereof with water~~.

10. (Currently Amended) Process according to claim [[1]] 9, in which the solvent ~~used~~ is water.

11. (Currently Amended) Process according to claim 9, in which the quantity of solvent ~~used~~ represents from 1 to 10 % ~~and preferably from 2 to 5 %~~ by weight of the total weight of the coating-particles that are present in the mixture of particles subject to crushing.

12. (Previously Presented) Process according to claim 1, in which the particles of size X and/or those of size Y are cylindrical, prismatic and/or in the form of blades.

13. (Currently Amended) Process according to claim 1, in which the ~~X/Y~~ Y/X ratio ~~varies~~ is between 0.17 and 0.6~~, preferably said ratio varies between 0.25 and 0.35~~.

14. (Currently Amended) Process according to claim 1, in which the crushing is carried out mechanically~~, preferably by HEBM, by jet air-milling, by mechano-melting of the Hosokawa type, by hybridization (preferably by using a NHS-O system marketed by NAR-Japan) and/or by using a combination of these techniques~~.

15. (Currently Amended) Process according to claim 14, wherein the crushing is carried out by mechano-melting at a rotation speed of the installation between 2000 and 3000 rotations/minute~~, preferably said rotation speed is between 2300 and 2700 rotations/minute~~.

16. (Currently Amended) Process according to claim 15, implemented for a period between 10 and 210 minutes~~, still more preferably for a period between 15 and 60 minutes~~.

17. (Previously Presented) Process according to claim 1, in which the particles of the mixture obtained are ellipsoidal.

18. (Currently Amended) Process according to claim 1, in which the tap density of the mixture of particles obtained is at least twice higher that that of the particles of size X that are used when starting said process.

19. (Currently Amended) Process according to claim 18, in which the tap density of the final product is > 0.9 g/cc~~, preferably the tap density is ≥ 1 g/cc~~.

20. (Currently Amended) Process according to claim 1, in which the specific surface area (BET) of the particles of size X varies between 1 and 50 m^2/g~~, preferably the specific surface area is between 2 and 10 m²/g~~.

21. (Currently Amended) Process according to claim 1, in which the specific surface area (BET) of graphite Y varies between 5 and 800 m^2/g~~, preferably said specific surface area varies between 10 and 500 m²/g~~.

22. (Previously Presented) Process according to claim 1, in which the particles of average size Y are ceramic particles hereinafter designated particles of size Y_c.

23. (Currently Amended) Process according to claim 22, in which the Y_c/X is ~~lower than 1, preferably said ratio is~~ between 0.0008 and 0.007.

24. (Currently Amended) Process according to claim 22, in which the ceramic is electronically conductive~~, and is preferably selected from the group consisting of nitrides, such as TiN and GaN~~.

25. (Currently Amended) Process according to claim ~~21~~ 22, in which the ceramic is electronically non-conductive ~~and is preferably selected from the group consisting of Al_2O_3 and $BaTiO_3$~~.

26. (Currently Amended) Process according to claim ~~21~~ 22, in which the ceramic is electronically semi-conductive ~~and is preferably selected from the group consisting of SiC and $BaTiO_3$~~.

27. (Currently Amended) Process according to claim ~~21~~ 22, in which the particles of ceramic have an average size Y_c such that 10nm < Y_c < 1µm~~, preferably such that 50nm < Y_c < 150nm~~.

28 (Currently Amended) Process according to claim 1, in which the particles of average size Y are particles of an alloy, hereinafter ~~(hereinafter~~ designated particles of size ~~Y_a)~~ Y_a, ~~consisting at least in part of~~ comprising Al, Sn, Ag, Si or a mixture of at least two thereof.

29. (Currently Amended) Process according to claim 28, in which ratio Y_a/X is such that 0.005 > Y_a/X > 0.2~~, preferably said ratio verifies the relationship 0.007 > Y_a/X > 0.0008~~.

30. (Canceled)

31. (Currently Amended) Process according to claim ~~30~~ 1, in which the coated particles that are prepared include a graphite based conductive nucleus and at least three partial or complete coatings of said nucleus,

said process further comprising a third crushing step, wherein the coated particles obtained in the second step of crushing ~~being~~ are subject to a third crushing in the presence of ~~an~~ a third interactive functional agent that is identical to or different from the first and second interactive functional agents used in the first two crushing steps,

the average size of the particles of the third interactive functional agent being smaller than that of the coated particles obtained in the second crushing step.

32. (Currently Amended) Coated particle ~~capable of being~~ obtained by ~~one of the processes~~ the process according to claim 1,

wherein said particle contains a nucleus that comprises graphite, said particle being partially or completely coated with at least two layers of a material comprising at least two interactive functional agents selected from the group consisting of graphite, ceramics, metals and alloys as well as mixtures of at least two thereof, and

wherein each of the layers has respective thicknesses E_1 and E_2 comprised between 50 nanometers and 5 micrometers.

33. (Canceled)

34. (Currently Amended) Particle according to claim 32, ~~consisting of~~ comprising a graphite nucleus with a purity higher than 95 %.

35. (Currently Amended) Particle according to claim 34, in which ~~the~~ impurities that are present in the nucleus do not interfere with the electronic properties of said particle.

36. (Original) Particle according to claim 35, in which the coating of the nucleus neutralizes electronic interferences generated by the impurities that are present in the graphite nucleus.

37. (Currently Amended) Particle according to claim 32, in which the size of the nucleus is between 7 and 100 micrometers~~, preferably the size of the nucleus is between 10 and 30 micrometers~~.

38. (Currently Amended) Particle according to claim 32, in which the coating of the nucleus ~~is made of~~ comprises graphite and has an average thickness between 1 and 5 micrometers.

39. (Currently Amended) Process according to claim 32, in which the coating of the nucleus ~~is made of~~ comprises a ceramic and has an average thickness between 50 and 150 nanometers.

40. (Canceled)

41. (Currently Amended) Particle according to claim ~~40~~ 32, in which each of the ~~2~~ two layers consists of a different material.

42. (Currently Amended) Particle according to claim 32, in which the nucleus is covered with three layers, each of the ~~3~~ three layers respectively having a thickness E_1, E_2, E_3 ~~preferably comprised between~~ each thickness being between 50 nanometers and 5 micrometers and the thicknesses of the three layers being such that their sum is ~~preferably~~ lower than 10 micrometers.

43. (Currently Amended) Particle according to claim 42, in which each of the ~~3~~ three layers consists of a different material.

44. (Currently Amended) Particle according to claim 32, ~~consisting of~~ comprising a graphite core wherein at least 80 % of its external surface is covered with said coating.

45. (Currently Amended) Mixture of particles as obtained by implementation of ~~one of the processes~~ the process defined in claim 1 and having at least one of the following properties:

an electronic conductivity between 10^{-22} and 10^{3} $Ohm^{-1}.cm^{-1}$; and

a particle size distribution preferably restricted between -50%, +50% .

46. (Currently Amended) Mixture of particles according to claim 45, in which the nucleus ~~consists of~~ comprises graphite, the coating is of metallic type and the electronic conductivity is higher than 300 $Ohm^{-1}.cm^{-1}$.

47. (Currently Amended) Mixture of particles according to claim 46, in which the coating ~~consists of~~ comprises aluminum and the electronic conductivity is higher than 350 $Ohm^{-1}.cm^{-1}$~~, preferably higher than about 377 x 103 Ohm-1.cm-1~~.

48. (Currently Amended) ~~Use of~~ An electrode of an electrical generator, wherein the electrode comprises an insulating material or a conductor, wherein the insulating material or conductor comprise the mixture of particles according to claim 47~~ as insulating material or conductor for an electrode of an electrical generator~~.

49. (Currently Amended) ~~Use of~~ A fuel cell, wherein the fuel cell comprises a mixture of particles according to claim 45, coated with CeO_2, Li_3PO_4, graphite-Ag and/or MgO-graphite ~~in fuel cells~~.

50-67. (Canceled)